

Application No. 09/509,725  
Amendment dated October 27, 2006  
Reply to Office Action of July 27, 2006

Docket No.: 0630-2009PUS1

### **REMARKS**

The Examiner is thanked for the due consideration given the application. No new matter is believed to be added to the application by this Amendment.

### **Status Of The Claims**

Claims 1-23, 25, 26 and 28-36 are pending in the application. Claims 2-19, 22 and 30-32 are withdrawn from consideration. The Amendments to claims 1 and 36 find support in, e.g., Figures 16A and 16B and in the specification at page 23 line 15 to page 24, line 25. Support for the amendments to claim 25 can be found in the specification at page 24, line 18.

### **Rejections Under 35 U.S.C. §112, First Paragraph**

Claims 1, 20, 21, 23, 25, 26, 28, 29 and 33-36 have been rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. Claims 1, 20, 21, 23, 25, 26, 28, 29 and 33-36 have been rejected under 35 U.S.C. §112, first paragraph as not being enabled. Applicants traverse.

At pages 2 and 3 of the Office Action, the Examiner asserts that the limitation of applying a voltage “for 5-60 seconds” in claims 1 and 36 is not described in the specification. However, claims 1 and 36 have been amended to recite that plasma deposition is performed “for 5-60 seconds.” This limitation finds full support in the originally filed application in, e.g., Figures 16A and 16B and in the specification at page 23, line 15 to page 24, line 25.

At page 4 of the Office Action, the Examiner asserts that the “5-60 seconds” processing time does not provide enablement for 1) the improvement when the polymer is formed from the

fluorine-containing monomer, and 2) the optimal processing time for the recited plasma polymerization resulted from the DC discharge from acetylene and other recited non-polymerizable gas. However, the claims of the present invention do not recite an "improvement" as asserted by the Examiner, but instead recite a method for surface processing by plasma polymerization. Also, claims 1 and 36 now recite a deposition time of "for 5-60 seconds" that is clearly elucidated by the specification.

At pages 4 and 5 of the Office Action, the Examiner additionally posits a broad interpretation and asserts that there is no enablement for 1) the polymer being formed from plasma polymerization of the fluorine-containing monomer with the non-polymerizable gas, and 2) the optimal processing time for the recited plasma polymerization resulted from the DC discharge from acetylene and other recited non-polymerizable gas. However, sufficient spectroscopic, film thickness and contact angle results have been set forth in the specification and Figures so that the claimed invention can be practiced (as opposed to the Examiner's worries about mechanisms) without undue experimentation.

"The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation." *United States v. Telectronics, Inc.*, 8 USPQ2d 1217 (Fed. Cir. 1988); *In re Stephens*, 188 USPQ 659 (CCPA 1976). "A patent may be enabling even though some experimentation is necessary; the amount of experimentation, however, must not be unduly extensive." *Utter v. Hiraga*, 6 USPQ2d 1709, 1714 (Fed. Cir. 1988).

As a result, the claims of the present invention are described and enabled by the disclosure of the application. These rejections are overcome and withdrawal thereof is respectfully requested.

**Rejection Under 35 U.S.C. §112, Second Paragraph**

Claim 25 has been rejected under 35 U.S.C. §112, second paragraph as being indefinite. Applicants traverse.

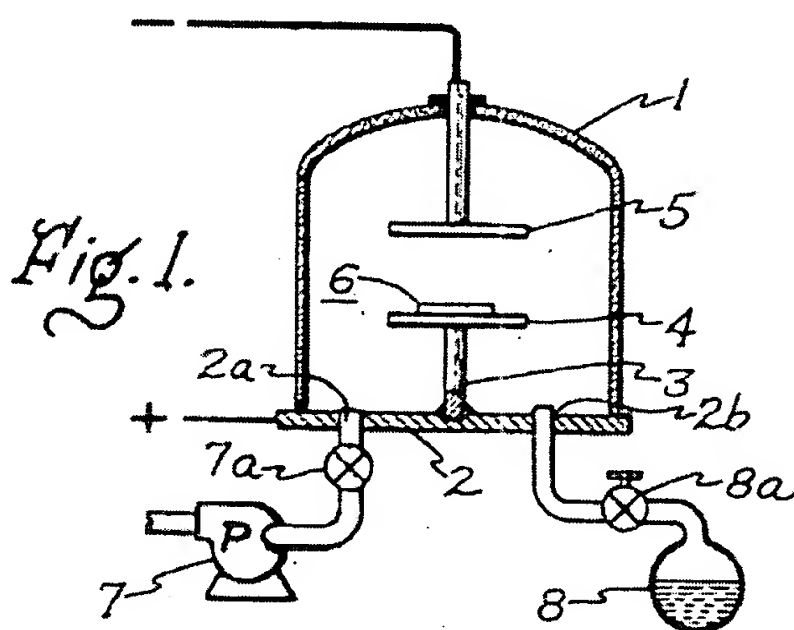
At page 5 of the Office Action, the Examiner asserts that a time period is being claimed that is broader than is set forth in claim 1. However, claim 25 has been amended to be clear, definite and have full antecedent basis. This rejection is overcome and withdrawal thereof is respectfully requested.

**Issues Under 35 U.S.C. §103(a)**

Claims 1, 20, 21, 25, 26, 28 and 33-35 have been rejected under 35 U.S.C. §103(a) as being unpatentable over the Cummin (U.S. Patent 3,252,83) in view of the Applicants' own disclosure and Haque (U.S. Patent 4,588,641). Claims 23 and 36 have been rejected under 35 U.S.C. §103(a) as being unpatentable over the Cummin (U.S. Patent 3,252,83) in view of the Applicants' own disclosure and Haque (U.S. Patent 4,588,641) and further in view of Yanagihara (U.S. Patent 4,693,799). Claim 29 has been rejected under 35 U.S.C. §103(a) as being unpatentable over the Cummin (U.S. Patent 3,252,83) in view of the Applicants' own disclosure and Haque (U.S. Patent 4,588,641) and further in view of Kleeberg (U.S. Patent

5,089,290). Applicants traverse the aforesaid rejections and respectfully request reconsideration and withdrawal thereof for the reasons set forth below.

Cummin pertains to a method a making an electric capacitor as illustrated in Fig. 1, which is reproduced below.



In Cummin, a substrate sheet 6 including an electrical insulating material layer and a metallized layer is subjected to “glow discharge” conditions, which include using DC current through electrodes 4 and 5 in a chamber 1 that is at least partially evacuated and into which a monomeric gas, such as an aliphatic unsaturated compound gas (e.g. acetylene), has been introduced. The aliphatic unsaturated compound gas is introduced optionally together with an inert carrier, such as nitrogen, as described at column 4. Cummin at column 5, lines 68-74 and in Example II describes using an aluminum base plate.

Cummin fails to disclose depositing a polymer through plasma polymerization on the surface of an anode electrode in a manner such as is described in claim 1 (and claim 36) of the present invention. Typically, Cummin requires that the substrate sheet 6 includes an electrical insulating material layer as described at column 4, lines 43-59. In addition, Cummin fails to disclose or suggest the 5-60 second time period feature of the present invention.

At page 5 of the Office Action, the Examiner asserts that the “Applicant’s admission” was cited in the last Office Action. However, the final Office Action of August 19, 2005 (which was the final Office Action before the filing of the Appeal Brief on May 11, 2006) has no reference to the “Applicant’s admission” combined with Cummin. However, at page 3 of the non-final Office Action of November 26, 2003, the Examiner combines the “Applicant’s admission” with Haque, stating: “Applicant admits in the second paragraph of page 3 of the specification that the generated plasma from a one-step plasma comprises ionized gas, radicals and the like.” In the current Office Action, the Examiner asserts at page 6: “As to plasma formation, Applicant admits in the first full paragraph of page 3 of the specification that ionized gas and radicals are formed inside the plasma.”

However, this passage in the specification is found in the section titled “Background Art.” There has been no admission of prior art by the applicants, and utilizing the Applicants’ disclosure as prior art without an admission of prior art is improper. *See, e.g., Riverwood International Corp. v. R.A. Jones & Co., Inc.*, 324 F.3d 1346, 66USPQ2d 1331 (Fed. Cir. 2003).

Further, the Applicants used the “Background Art” section of the specification to explain the problem that the invention solves. In *In re Nomiya*, the CCPA determined that even if there

has been an admission of prior art, this admission of prior art will still not render an invention obvious if it points out the source of the problem that the invention solves.

It should not be necessary for this court to point out that a patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is *part* of the “subject matter as a whole” which should always be considered in determining the obviousness of an invention under 35 U.S.C. 103. *In re Antonson*, 47 CCPA 740, 272 F.2d 948, 124 USPQ 132; *In re Lennert*, 50 CCPA 753, 309 F.2d 498, 135 USPQ 307. The court must be ever alert not to read obviousness into an invention on the basis of the applicant’s own statements; that is, we must view the prior art without reading into that art appellant’s teachings. *In re Murray*, 46 CCPA 905, 268 F.2d 226, 122 USPQ 364; *In re Sporck*, 49 CCPA 1039, 301 F.2d 686, 133 USPQ 360. The issue, then is whether the teachings of the prior art would, *in and of themselves and without the benefits of the appellant’s disclosure*, make the invention as a whole, obvious. *In re Leonor*, 55 CCPA 1198, 395 F.2d 801, 158 USPQ 20. (Emphasis in original) *In re Nomiya*, 509 F.2d 566, 571, 184 USPQ 607, 612 (CCPA 1975).

In this case, there has been no admission of prior art. Even if one assumes *arguendo* that the subject matter discussed in the “Background Art” section constitutes prior art, this disclosure depicts the problem that the invention solves. These teachings therefore cannot be used to provide motivation to combine references.

At page 7 of the Office Action, the Examiner turns to Haque for teachings pertaining to using plasma treatment to improve adhesion. However, these teachings of Haque fail to address the inability to combine Cummin with the Applicants’ own disclosure. As a result, one of ordinary skill in the art would not be motivated by Cummin, the Applicants’ disclosure and Haque to produce independent claim 1 of the present invention. A *prima facie* case of obviousness has thus not been made. Claims depending upon claim 1 are patentable for at least the above reasons.

At page 8 of the Office Action, the Examiner turns to Yanagihara for teachings pertaining to periodicity of DC discharge. At pages 8 and 9 of the Office Action, the Examiner turns to Kleeberg for teachings pertaining to annealing. However, these teachings of Yanagihara and Kleeberg fail to address the inability of Cummin, the Applicants' disclosure and Haque to render unpatentable a claimed embodiment of the invention.

Yet further, the present invention shows unexpected results that would fully rebut any obviousness that could be alleged. These results can typically be found in Figure 16A and 16B, which set forth results for film thickness and contact angle that demonstrate the criticality of the claimed 5-60 second deposition time.

The present invention is thus patentable for all the above reasons. These rejections are overcome and withdrawal thereof is respectfully requested.

### **Conclusion**

The Examiner's rejections have been overcome. No issues remain. The Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert E. Goozner, Ph.D. (Reg. No.42,593) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

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Respectfully submitted,

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